

Federal Communications Commission

§76.611

immediately prior to the trap or filter for the specific channel. The effects of these traps or filters, as certified by the system engineer or the equipment manufacturer, must be attached to each proof-of-performance record.

(j) Measurements made to determine the differential gain, differential phase and the chrominance-luminance delay inequality (chroma delay) shall be made in accordance with the NCTA Recommended Practices for Measurements on Cable Television Systems, 2nd edition, November 1989, on these parameters.

[37 FR 3278, Feb. 12, 1972, as amended at 37 FR 13867, July 14, 1972; 41 FR 10067, Mar. 9, 1976; 42 FR 21782, Apr. 29, 1977; 49 FR 45441, Nov. 16, 1984; 57 FR 11004, Apr. 1, 1992; 57 FR 61011, Dec. 23, 1992; 58 FR 44952, Aug. 25, 1993]

§76.610 Operation in the frequency bands 108-137 and 225-400 MHz—scope of application.

The provisions of §§76.611 (effective July 1, 1990), 76.612, 76.613, 76.614 and 76.1803 and 76.1804 are applicable to all cable television systems transmitting carriers or other signal components carried at an average power level equal to or greater than 10^{-4} watts across a 25 kHz bandwidth in any 160 micro-second period, at any point in the cable distribution system in the frequency bands 108-137 and 225-400 MHz for any purpose. For grandfathered systems, refer to §§76.618 and 76.619.

NOTE 1: See the provisions of §76.616 for cable operation near certain aeronautical and marine emergency radio frequencies.

NOTE 2: Until January 1, 1990, the band 136-137 MHz is allocated as an alternative allocation to the space operation, meteorological-satellite service and the space research service on a primary basis. After January 1, 1990, the space service will become secondary to aeronautical mobile service radio. Until January 1, 1990, the band 136 to 137 MHz is excluded from the rule sections regarding protection of aeronautical frequencies.

[50 FR 29399, July 19, 1985, as amended at 65 FR 53616, Sept. 5, 2000]

§76.611 Cable television basic signal leakage performance criteria.

(a) No cable television system shall commence or provide service in the frequency bands 108-137 and 225-400 MHz unless such systems is in compliance with one of the following cable tele-

vision basic signal leakage performance criteria:

(1) prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, based on a sampling of at least 75% of the cable strand, and including any portion of the cable system which are known to have or can reasonably be expected to have less leakage integrity than the average of the system, the cable operator demonstrates compliance with a cumulative signal leakage index by showing either that (i) $10 \log I_{3000}$ is equal to or less than -7 or (ii) $10 \log I_{\infty}$ is equal to or less than 64 , using one of the following formula:

$$I_{3000} = \frac{1}{\theta} \sum_{i=1}^n \frac{E_i^2}{R_i^2},$$

$$I_{\infty} = \frac{1}{\theta} \sum_{i=1}^n E_i^2,$$

where:

$$R_i^2 = r_i^2 + (3000)^2$$

r_i is the distance (in meters) between the leakage source and the center of the cable television system;

θ is the fraction of the system cable length actually examined for leakage sources and is equal to the strand kilometers (strand miles) of plant tested divided by the total strand kilometers (strand miles) in the plant;

R_i is the slant height distance (in meters) from leakage source i to a point 3000 meters above the center of the cable television system;

E_i is the electric field strength in microvolts per meter ($\mu\text{V/m}$) measured pursuant to §76.609(h) 3 meters from the leak i ; and

n is the number of leaks found of field strength equal to or greater than $50 \mu\text{V/m}$ pursuant to Section 76.609(h).

The sum is carried over all leaks i detected in the cable examined; or

(2) prior to carriage of signals in the aeronautical radio bands and at least once each calendar year, with no more than 12 months between successive tests thereafter, the cable operator demonstrates by measurement in the airspace that at no point does the field strength generated by the cable system exceed $10 \mu\text{V/m}$